



THE HANFORD SITE

Proposed Permit Modification for the Groundwater Monitoring Plan at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility Operating Unit

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U.S. Department of Energy

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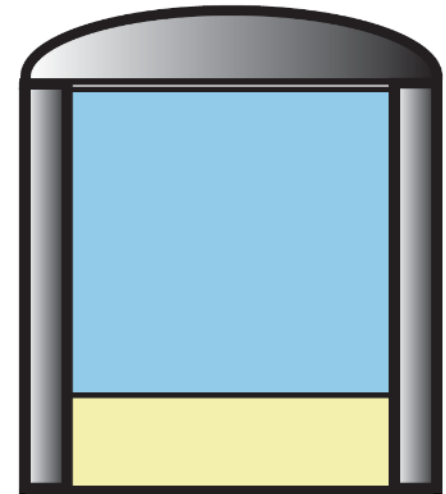
Direct-Feed Low-Activity Waste Configuration



Direct-Feed Low-Activity Waste Configuration (cont.)

Chemical and radioactive waste is stored in Hanford's Tank Farms. The U.S. Department of Energy (DOE) will safely, efficiently and effectively treat Hanford tank waste through the Direct-Feed Low-Activity Waste (DFLAW) Program to vitrify it (immobilize it within glass).

- Secondary liquid waste will be created during the vitrification of low-activity waste in the Waste Treatment and Immobilization Plant (WTP) during the DFLAW process
- The Liquid Effluent Retention Facility (LERF) and the 200 Area Effluent Treatment Facility (ETF) will be used to manage and treat the secondary liquid waste

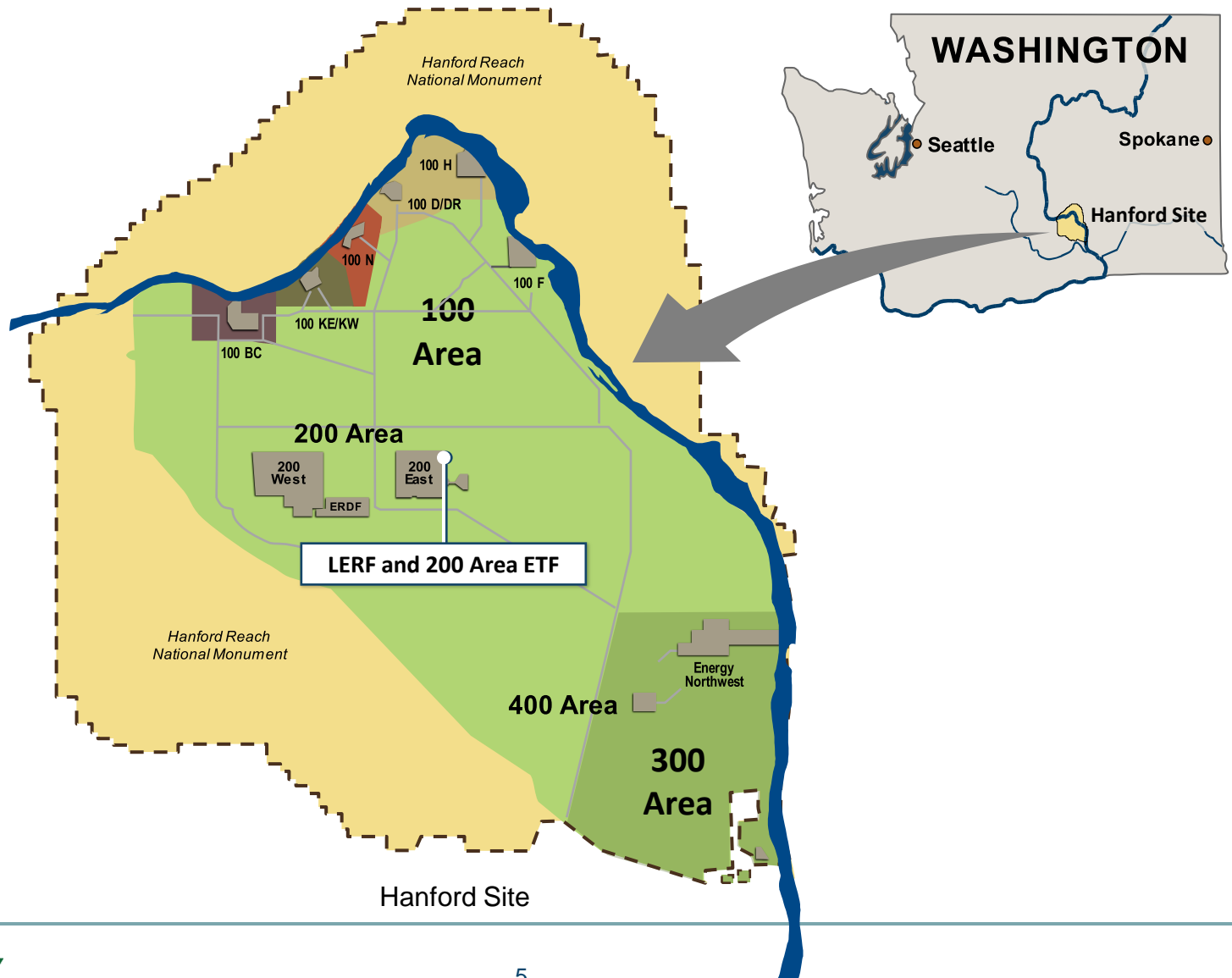


Typical tank contents with a liquid (blue) and solid (yellow) fraction shown

Regulatory Framework for Permitting Action

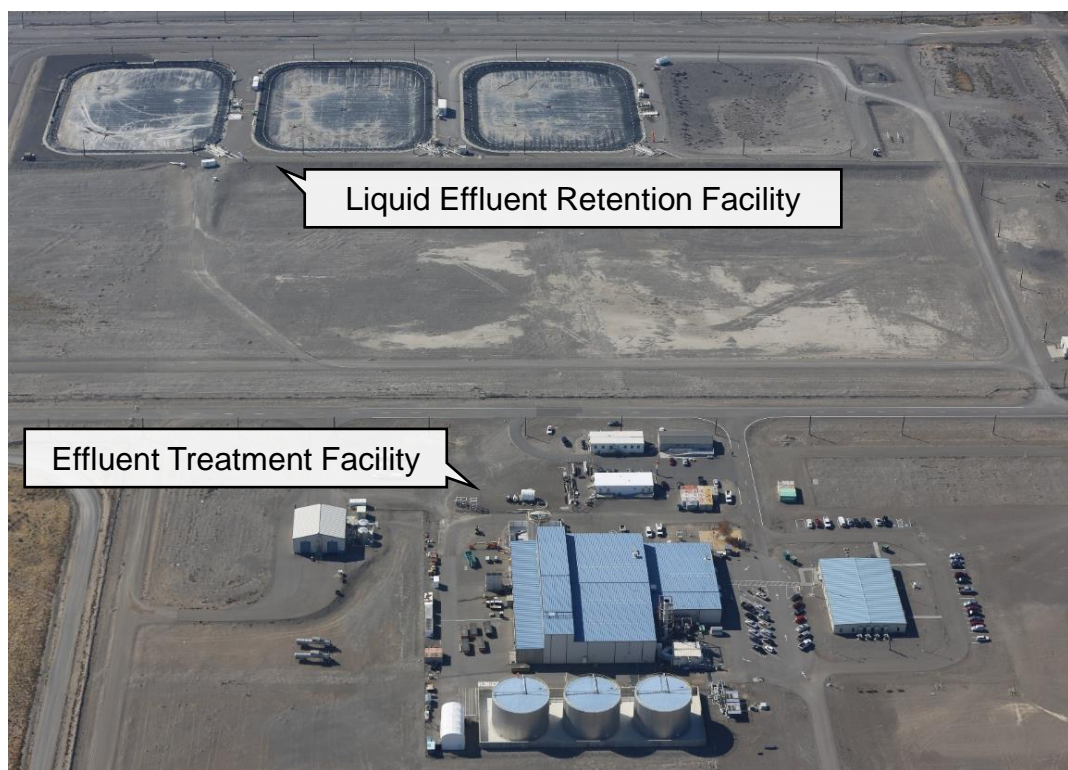
- The *Resource Conservation and Recovery Act* (RCRA) Hanford Dangerous Waste Permit governs dangerous waste treatment, storage and disposal at the Hanford Site
- The Washington State Department of Ecology (the regulator) issued the current Hanford Sitewide permit (Revision 8C), which governs dangerous waste treatment, storage and disposal
- DOE and contractor Washington River Protection Solutions (the permittees) are proposing a Class 2 permit modification to the LERF and 200 Area ETF, Operating Unit Group 3

LERF and 200 Area ETF: Location



LERF and 200 Area ETF: Background

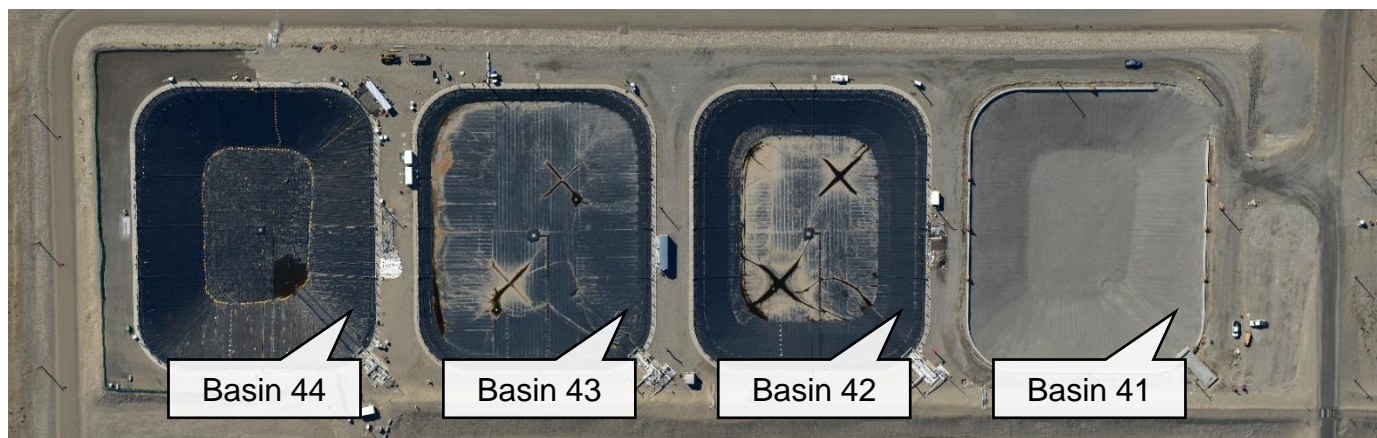
These facilities work to store, treat and dispose of large volumes of liquid waste, which will include liquid waste generated from the WTP upon startup of DFLAW operations.



Aerial view of the Liquid Effluent Retention Facility (top) and 200 Area Effluent Treatment Facility (bottom)

The LERF provides interim storage necessary for large volumes of liquid waste prior to treatment.

- Consists of four RCRA-permitted surface impoundments (or basins); the fourth basin (Basin 41) is currently being constructed
- Permitted storage capacity of 7.8 million gallons in each basin
- Waste consists of process condensates, leachates and other miscellaneous waste streams; will include WTP DFLAW effluent



Purpose of the Permit Modification: Groundwater Monitoring

The purpose of this proposed permit modification is to incorporate a revised groundwater monitoring plan for the LERF that:

- Accommodates acceptance of WTP liquid effluent
- Provides for monitoring of Basin 41

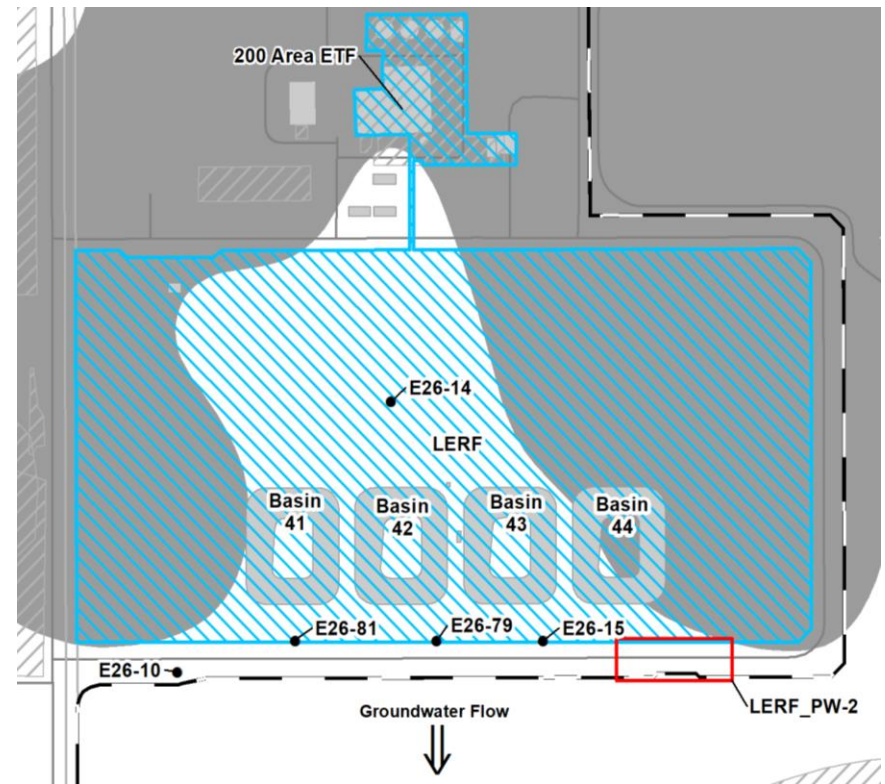
Changes to the LERF Groundwater Monitoring Plan include the following updates to the monitoring constituents:

- Incorporates monitoring constituents for the new WTP waste stream
- Adds indicator constituents
- Adds additional two years of sampling for new wells

Purpose of the Permit Modification: Revised Well Network

Other changes to the LERF Groundwater Monitoring Plan include the following:

- Incorporation of two new compliance wells to monitor the area downgradient of Basin 41
- Removal of well 299-E26-77 (water-level measurements only)
- Incorporation of one compliance well to monitor the area downgradient of Basin 44 (after the first year of sampling of the new wells)



Purpose of the Permit Modification: Document Updates

Other changes include the following:

- Revised template language, technical content and format
 - Reformatted for consistency with other final-status permit groundwater monitoring plans at the Hanford Site
 - Removed information that is provided in the Engineering Evaluation Report
 - Revised stratigraphy, hydrology and groundwater flow sections
- Revised Appendix A, “Quality Assurance Project Plan,” to updated standard
- Revised Appendix B, “Sampling Protocol,” to updated standard
- Revised Appendix C, “Well Construction,” to accommodate network changes

The modified chapters for the LERF and 200 Area ETF permit modification include the following:

- Addendum D, “Groundwater Monitoring Plan”
- Unit-Specific Conditions

Refer to the corresponding Hanford Dangerous Waste Permit Change Notice for a full description of the proposed changes.

- Class 2 Permit Modification for LERF and 200 Area ETF
- A 60-day public comment period is open through May 28
- Submit comments via mail or electronically (preferred) to the Washington State Department of Ecology at the address below:



Daina McFadden
Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354

<https://nw.ecology.commentinput.com/?id=ruPTb>

Questions?



The Hanford Reach
White Bluffs Overlooking the Columbia River